Nebraska’s Innovative Prescription Data Utilization

Kevin C. Borcher, PharmD
PDMP Program Director
NeHII, Inc.

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October 30, 2018
Nebraska PDMP Legislative Summary

• LB 237 (2011)
  • Creation of Nebraska PDMP

• LB 1072 (2014)
  • Repeal no funding stipulation

• LB 471 (2016)
  • Prevents opting out
  • Allow prescribers and dispensers to access the system at no cost
  • Report all dispensed controlled substance prescriptions by January 1, 2017
  • Report ALL dispensed prescriptions by January 1, 2018

• LB 223 (2017)
  • Allow prescriber designees
  • Veterinarians report all dispensed schedule II-IV controlled substances by July 1, 2018

• LB 1034 (2018)
  • Exclude reporting of non-human non-controlled substances
  • Clarify pharmacist use of the PDMP

• Neb. Rev. Stat § 71-2454
• Neb. Rev. Stat § 84-712.05(19)
Drugs Reported to PDMPs

• Controlled substances
  • Opioids
  • Benzodiazepines
  • Stimulants

• “Drugs of Concern”
  • Tramadol (prior to being scheduled)
  • Carisoprodol
  • Naloxone
  • Gabapentin
Reasons to Require Reporting

• All drugs can be a “Drug of Concern”
• Patient safety
• “Allow prescribers and dispensers to monitor the care and treatment of patients”
  • Neb. Rev. Stat. §§ 71-2454
• Allow providers to make informed treatment decisions
• Improve the quality of health care
Nebraska’s Innovative Approach

• PDMP monitors controlled substances and some “drugs of concern”
• All prescription drugs can be drugs of concern
  • Drug interactions, allergies
• HIE users accustomed to seeing the med history, not just opioids, controlled substances
By the Numbers - Prescriptions

• January 1 – December 31, 2017
  • 3,882,974 dispensed prescription records (1.9M pop.)
    • 2.04 Rx/person

• January 1 – August 31, 2018
  • 20,989,152 dispensed prescription records
    • 18,890,705 (90%) dispensed non-controlled substances

• 2017 Average 10,638 Rx/day
• 2018 Average 86,436 Rx/day
Nebraska PDMP Reported Data
January 2017 – August 2018

Monthly # Unique Dispensed Prescriptions Reported
By the Numbers – Enrolled Users

• **7,366** Enrolled users of the PDMP (as of 8/31/18)
  • **4,873** (37.6%) prescribers (MD, APRN, DDS, DVM, PA)
    • with address in NE, KS, MO, IA, SD, WY, CO
  • **2,002** (58.6%) dispensers (i.e., pharmacists)
    • with address in NE, KS, MO, IA, SD, WY, CO
  • **491** (0.7%) designees (e.g., nurses, pharmacy technicians, pharmacist interns, etc.)
    • with address in NE, KS, MO, IA, SD, WY, CO
User Queries
July 2017 – August 2018

# Unique Queries per Month

<table>
<thead>
<tr>
<th>Month</th>
<th>Queries</th>
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<tbody>
<tr>
<td>Jul-17</td>
<td>9,008</td>
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<tr>
<td>Aug-17</td>
<td>9,844</td>
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<td>7,169</td>
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<td>Oct-17</td>
<td>7,741</td>
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<td>Nov-17</td>
<td>8,160</td>
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<td>Dec-17</td>
<td>9,088</td>
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<td>Jan-18</td>
<td>12,461</td>
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<tr>
<td>Feb-18</td>
<td>15,431</td>
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<tr>
<td>Mar-18</td>
<td>20,315</td>
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<tr>
<td>Apr-18</td>
<td>24,939</td>
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<tr>
<td>May-18</td>
<td>29,528</td>
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<td>Jun-18</td>
<td>31,328</td>
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<td>Jul-18</td>
<td>34,444</td>
</tr>
<tr>
<td>Aug-18</td>
<td>40,194</td>
</tr>
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</table>
It’s More Than Data

**Data - Information** in raw or unorganized form (such as alphabets, numbers, or symbols) that refer to, or represent, conditions, ideas, or objects.

**Information** - Data that is (1) **accurate** and timely, (2) specific and **organized** for a purpose, (3) presented within a **context** that gives it meaning and relevance, and (4) can lead to an increase in understanding and decrease in **uncertainty**.

**Knowledge** - Human faculty resulting from interpreted information; understanding that germinates from combination of data, information, experience, and **individual** interpretation.
Nebraska PDMP Reported Data and Errors
July 2017 – July 2018

Successful Uploads and Error Percentage, Nebraska PDMP, July 2017 - July 2018

Source: Nebraska Prescriptions Drug Monitoring Program data, July 2017 - July 2018
Lessons Learned - Reporting

• “Report all prescriptions dispensed”
• Intent vs. Interpretation
  • Human prescription drugs
  • Veterinary drugs
    • Legislation to exclude non-human non-controlled
  • Supplies, devices
    • Diabetic test strips, syringes
  • Durable Medical Equipment (DME)
• NDC, UPC, HCPCS, NADA
  • Legislation specifically required NDC
  • DSP07=01
Report vs. Display

• Filter products
  • Legislation specifically requires NDC
  • DSP07=01
  • UPC, HCPCS, NADA

• Drug database
  • “Drug Name Not Found”
  • Report obsolete NDCs
### Controlled Substances

<table>
<thead>
<tr>
<th>Patient</th>
<th>Fill Date</th>
<th>Sold Date</th>
<th>Drug</th>
<th>Days</th>
<th>Refills</th>
<th>Prescriber</th>
<th>Pharmacy</th>
<th>Payment</th>
<th>Drug Code</th>
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<tbody>
<tr>
<td>1</td>
<td>09/02/2010</td>
<td>09/16/2010</td>
<td>hydrocodone-aerosol (Vivitrol) 100 mg tablet</td>
<td>109</td>
<td>0</td>
<td>Miralexis 999</td>
<td>Spine &amp; Spine FHD: 1366299499</td>
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<td>420009492</td>
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<td>oxycodone (targeta) 10 mg tablet</td>
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<td>2</td>
<td>07/20/2015</td>
<td>07/08/2015</td>
<td>oxycodone (targeta) 1 mg tablet</td>
<td>18</td>
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<td>Derek Crocker</td>
<td>Perkins A Medical Pharmacy FHD: 3333222222</td>
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<td>07/16/2016</td>
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<td>Derek Crocker</td>
<td>Perkins A Medical Pharmacy FHD: 3333222222</td>
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<tr>
<td>2</td>
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<td>07/16/2016</td>
<td>oxycodone (DoxCon) 15 mg tablet</td>
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<td>5</td>
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<td>07/15/2015</td>
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<td>50</td>
<td>Leavitt McCorl</td>
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<tr>
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<td>oxycodone (targeta) 5 mg tablet</td>
<td>17</td>
<td>17</td>
<td>Bharara T Potter</td>
<td>atMed Pharmacy FHD: 3333222222</td>
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<tr>
<td>2</td>
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<tr>
<td>2</td>
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### Non-Controlled Substances

<table>
<thead>
<tr>
<th>Patient</th>
<th>Fill Date</th>
<th>Sold Date</th>
<th>Drug</th>
<th>Days</th>
<th>Refills</th>
<th>Prescriber</th>
<th>Pharmacy</th>
<th>Payment</th>
<th>Drug Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
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<td>09/22/2015</td>
<td>oxycodone (Tylox) 325 mg tablet</td>
<td>2</td>
<td>4</td>
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<td>Medicare</td>
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<tr>
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<td>09/18/2015</td>
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<td>AT TTS FHD: 9094509000</td>
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</tr>
<tr>
<td>3</td>
<td>09/22/2015</td>
<td>09/22/2015</td>
<td>oxycodone not found NOD ID: 31001111111</td>
<td>11111111</td>
<td>11</td>
<td>KIMBERLY COOKER</td>
<td>AT TTS FHD: 9094509000</td>
<td>Medicare</td>
<td>000000000</td>
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<tr>
<td>4</td>
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<td>08/10/2015</td>
<td>acetaminophen (Tylenol) 645 mg tablet</td>
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<td>50</td>
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<td>LARRY CRISLER</td>
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<td>4</td>
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<td>08/10/2015</td>
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<td>50</td>
<td>LARRY CRISLER</td>
<td>Perkins A Medical Pharmacy FHD: 3333222222</td>
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<tr>
<td>4</td>
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<td>08/10/2015</td>
<td>acetaminophen (Tylenol) 645 mg tablet</td>
<td>50</td>
<td>50</td>
<td>LARRY CRISLER</td>
<td>Perkins A Medical Pharmacy FHD: 3333222222</td>
<td>Private Pay</td>
<td>000000000</td>
</tr>
</tbody>
</table>

*Disclaimer: Certain information may not be reliable or accurate in this report, including those that the patient asked to be disclosed due to medical privacy concerns, other non-drug medications, low cost prescriptions, or if the patient is not enrolled in a prescription drug program or insurance provider. It should be independently verified by the patient.*
<table>
<thead>
<tr>
<th>Patient</th>
<th>Fill Date</th>
<th>Sold Date</th>
<th>Drug</th>
<th>Qty</th>
<th>Days</th>
<th>Refills</th>
<th>Prescriber</th>
<th>Pharmacy</th>
<th>Payment</th>
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<tbody>
<tr>
<td>5</td>
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<td>06/05/2018</td>
<td>hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-200 mg tablet</td>
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<td>10</td>
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<tr>
<td>5</td>
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<td>06/07/2018</td>
<td>hydrocodeine-acetaminophen (Viscordin) 5-200 mg tablet</td>
<td>180</td>
<td>30</td>
<td>30</td>
<td>Dongio Howser</td>
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<tr>
<td>2</td>
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<td>05/02/2018</td>
<td>acetaminophen (Tylenol) 325 mg tablet</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>JOHNNY BLAZE</td>
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<tr>
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<td>05/07/2018</td>
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<td>2</td>
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<td>Janet Fraser</td>
<td>Kevin's Pharmacy PH#: 405699999</td>
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<tr>
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<td>04/13/2018</td>
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<td>Janet Fraser</td>
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<tr>
<td>4</td>
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<td>oxycodone (OxyContin) 16 mg tablet</td>
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<tr>
<td>4</td>
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<td>03/02/2018</td>
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<td>Private Pay</td>
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<td>03/05/2018</td>
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<td>03/02/2018</td>
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<tr>
<td>4</td>
<td>03/02/2018</td>
<td>03/02/2018</td>
<td>simvastatin (Zocor) 40 mg tablet</td>
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<td>30</td>
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<td>03/02/2018</td>
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<td>Commercial insurance</td>
</tr>
<tr>
<td>4</td>
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<td>02/10/2018</td>
<td>ciprofloxacin HCl (ciprofloxacin HCI) 500 mg tablet</td>
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<td>10</td>
<td>Gregory House</td>
<td>Big Box Pharmacy PH#: 405699999</td>
<td>Private Pay</td>
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<tr>
<td>4</td>
<td>02/15/2018</td>
<td>02/15/2018</td>
<td>oxaprozin (omnipaque) 30 mg tablet, delayed release (DR/EC)</td>
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<td>30</td>
<td>30</td>
<td>Gregory House</td>
<td>Big Box Pharmacy PH#: 405699999</td>
<td>Private Pay</td>
</tr>
</tbody>
</table>
Errors

• Learning process
• New process for many pharmacies
  • “We don’t dispense controlled substances, so we don’t need to report”
• Some pharmacies resent same files repeatedly, causing error rates to increase
• Field delimiter contained within field, causing “shift” of fields
  • Asterisk entered in Address field interpreted as field separator
• Some coded missing or extra fields
Errors

- NPI
  - Legislation
  - Veterinarians and some pharmacies don’t have NPI
  - Restricted manual entry/override of NPI
  - Map prescriber 10-digit phone number to NPI field

- “Record does not exist to be voided”
  - Original not submitted prior to January 1
  - Cancelled/reversed prescriptions errored because original prescription not found, so no match when DSP01=02 for Rx

- Information entered for non-controlled Rx has variations that may not conform to ASAP format
  - Refills Authorized (DSP04) may have > 99 refills
  - Address not required for non-controlled or may contain extraneous information
ASAP Pharmacy Segment Errors

• Pharmacy NPI (PHA01)
  • Pharmacy 10-digit phone number

• Pharmacy DEA (PHA03)
  • May not exist

• Pharmacy name, address
  • Field length
ASAP Prescriber Segment Errors

• NPI, DEA (PRE01/PRE02)
  • Required by Nebraska statute
  • Veterinarians not allowed by CMS to have NPI
  • Some pharmacy systems require valid check digit
  • Alternatively use prescriber phone number

• Prescriber name
  • Missing prescriber first/last name
  • Vendor programming issue
ASAP Patient Segment Errors

• Patient ID Qualifier (PAT02)
  • Invalid format

• Patient address (PAT 12-16)
  • Not required for prescriptions but required for PDMP
  • Missing/invalid zip code

• Telephone number (PAT17)
  • Invalid format
ASAP Patient Segment Errors

• Date of Birth (PAT18)
  • Invalid format
  • Missing
• Gender (PAT19)
  • Invalid format
  • Missing
• Veterinary patient/client/owner
  • Who is the “patient”?  
  • Who is the owner?
  • Name
  • Date of Birth
ASAP Dispensing/Prescription Segment Errors

- Reporting Status (DSP01)
  - Voids prior to original being reported
  - Nursing home pharmacies report daily dispensing
- Date filled earlier than Date written (DSP03, DSP05)
  - Nursing home pharmacy processing
- Refills authorized (DSP04)
  - Not meeting ASAP format criteria
    - PRN defaulted to 999 as pharmacy process
- Pharmacist NPI (DSP14)
  - Pharmacies use certain fields for purposes other than intended
- Payment type (DSP16)
  - Home health, home infusion, nursing home pharmacies not previously used
  - Separate billing system
- RxNorm (DSP18/DSP19)
  - Not meeting ASAP format criteria
    - SCD vs 01
ASAP Dispensing/Prescription Segment Errors

- Product ID (DSP08)
  - NDC required
  - UPC, HCPCS, NADA
  - DSP07=03
  - Some invalid length
  - DSP07=02 for veterinary products

- CDI
  - Majority of errors
  - Not previously reported for non-controlled substances
  - Some ingredients don’t have NDC
    - Flavorings
    - Chemicals, vitamins
    - Tubing, pumps, mailing labels
  - General number (e.g., 88888888888) to allow for validation
Future Dispensing/Prescription Considerations

• Indication

• Rx SIG
  • Requested by end users
  • ASAP 4.2A
  • Technically complex
  • Sig vs. abbreviation vs. Free text
    • Take one tablet by mouth two times daily
    • i po BID
    • 12D

• Dialogue with pharmacies, vendors
What’s Next?

- Population Analytics
  - Other Data Needs (Ingesting other data sets)
  - HEDIS/NCQA/Stand. Supp. Data
  - QCDR (CMS, State Reporting)
  - QE (Ingesting Claims)
  - Data + Performance Improvement
  - HIE (Foundation)
Lessons Learned for Continued Success

• Communication
  • Early, frequent notification to pharmacies and vendors

• Cooperation
  • Several pharmacies have never reported

• Collaboration
  • Relationship building
    • Call vendors
    • Status updates
    • Test accounts to validate files

• Error monitoring

• Better quantity and quality of data
Contact Information

• Kevin Borcher – PDMP Program Director, NeHII
  • 402-290-2635  kborcher@nehii.org

• PDMP Support  pdmp@nehii.org

• Felicia Quintana-Zinn, Drug Overdose Prevention Epidemiologist, DHHS
  • 402-471-0379  Felicia.Quintana-Zinn@Nebraska.gov